Specifications

DTP CrossPoint 84 IPCP Series

Video

Routing	8 x 4 matrix
Maximum data rate	10.2 Gbps (3.4 Gbps per color)
Maximum pixel clock	300 Mhz
Resolution	1920x1200 or 1080p @ 60 Hz; 8, 10, or 12 bit color depth 4K (4096x2160) @ 30 Hz, UHD (3840x2160) @ 30 Hz
Formats	RGB and YCbCr digital video
Standards	DVI 1.0, HDMI, HDCP 1.1, CEA-861E

Video input

Number/signal type	6 HDMI digital video (HDCP compliant) 2 DTP or XTP (configurable)
Connectors	6 female HDMI type A 2 female RJ-45

Matrix video outputs (non scaled)

Number/signal type	2 HDMI digital video (HDCP compliant)
Connectors	2 female HDMI

Scaled TP outputs

Number/signal type	2 DTP, XTP, or HDBase T (configurable)
Connectors	2 female RJ-45
Video processing	
Digital pixel data bit depth	8, 10, or 12 bits per channel; 165 MHz pixel clock (HDMI)
Colors	1.07 billion (10-bit processing)
Video input	
Horizontal frequency	15 kHz to 100 kHz
Vertical frequency	24 Hz to 75 Hz
Resolution range	640x480 to 1600x1200 and 1920x1200* 480i, 480p, 576i, 576p, 720p, 1080i, 1080p, and 2K *reduced blanking
Scaled resolutions	640x480[8], 800x600[8], 852x480[8], 1024x768[8], 1024x852[8], 1024x1024[8],1280x768[8], 1280x800[8], 1280x1024[8], 1360x765[8], 1360x768[8], 1365x768[8], 1366x768[8], 1365x1024[8], 1400x1050[8], 1440x900[8], 1600x900[8], 1600x1200[8], 1680x1050[8], 1920x1200[8] HDTV 480p[7,8], 576p[6], 720p[3,4,5,6,7,8], 1080i[6,7,8], 1080p[1,2,3,4,5,6,7,8], 2048x1080[1,2,3,4,5,6,7,8] [1] = at 23.98 Hz, [2] = at 24 Hz, [3] = at 25 Hz,[4] = at 29.97 Hz, [5] = at 30 Hz, [6] = at 50 Hz, [7] = at 59.94 Hz, [8] = at 60 Hz

Shielded twisted pair interconnection

Connectors	Female RJ-45
Termination standard	TIA/EIA T568B
Signal transmission distance	
Resolutions up to 1080p	
DTP 330	Up to 330' (100 m) using shielded twisted pair cable or XTP DTP 24 TP cable
DTP 230	Up to 230' (70 m) using shielded twisted pair cable or XTP DTP 24 TP cable
4K @ 30 Hz	
DTP 330	Up to 330' (100 m) using shielded twisted pair cable or XTP DTP 24 TP cable
DTP 230	Up to 130' (40 m) using shielded twisted pair cable or XTP DTP 24 TP cable
Cable requirements	Solid conductor, 24 AWG or better
Cable recommendations	400 MHz bandwidth, STP (shielded twisted pair)

NOTE: Extron XTP DTP 24 shielded twisted pair cable is strongly recommended for optimal performance.

NOTE: Input and output mode signaling:
- **DTP**: HDMI with embedded audio, analog audio, RS-232 and IR, and remote power
- **XTP**: HDMI with embedded audio plus RS-232 and IR
- **HDBT**: HDMI with embedded audio plus RS-232 and IR

Audio system (mic/line input to line output)

Gain	Unbalanced output: -6 dB; balanced output: 0 dB
Frequency response	20 Hz to 20 kHz, ±0.2 dB
Input impedance	>10k ohms unbalanced, >20k ohms balanced
THD + Noise	0.01% at 1 kHz nominal level
S/N	>105 dB at maximum balanced output (unweighted)
Crosstalk	<-90 dB @ 20 Hz to 20 kHz, fully loaded
Stereo channel separation	>80 dB @ 20 Hz to 20 kHz
Digital conversion	24-bit, 48 kHz

Audio

Routing	8 x 4 stereo switching matrix 4 x 4 microphone mixing matrix
Supported formats — Pass through	
HDMI connectors	LPCM up to 7.1/24-bit/192kHz, Dolby TrueHD, Dolby Digital Plus, Dolby Digital EX, Dolby Digital 5.1, Dolby Digital 2/0 Surround, Dolby Digital 2/0, DTS-HD Master Audio, DTS-HD, DTS ES Discrete 6.1, DTS ES Matrix 6.1, DTS Digital Surround 5.1, DTS 2 Channel
Analog conectors	Analog stereo audio
DTP connectors	De-embedded from HDMI [PCM only] or remote balanced/unbalanced analog

Audio input

Number/signal type	6 stereo, analog line level, balanced or unbalanced 6 stereo, de-embedded from HDMI (PCM only) 2 DTP (de-embedded from HDMI [PCM only] and remote balanced/unbalanced analog), or XTP (embedded digital)
Connectors	(6) 3.5 mm captive screw connectors, 5 pole for analog line level inputs 6 female HDMI type A 2 female RJ-45
Analog audio	
Nominal level	+4 dBu, -10 dBV adjustable via input gain
Maximum level	+21 dBu balanced, +15 dBu unbalanced
Input gain adjustment	-18 dB to +24 dB, 0.1 dB steps, adjustable per input

NOTE: Unbalanced analog inputs at a DTP Tx input have +12 dB of gain applied to bring the signal to a nominal level for balanced operation.

NOTE: 0 dBu = 0.775 Vrms, 0 dBV = 1 Vrms, 0 dBV ≈ 2 dBu.

Mic/line input

Number/signal type	4 mono, mic/line, balanced/unbalanced (with phantom power)
Connectors	(4) 3.5 mm captive screw connectors, 3 pole
Impedance	10k ohms unbalanced, 20k ohms balanced
Nominal level	-60 dBV, +4 dBu, -10 dBV, adjustable via input gain
Maximum level	>+21 dBu at rated THD+N when mic gain is set to 0 dB
Equivalent input noise	<-120 dBV (1.0 µVrms) at +40 dB input gain
CMRR	>70 dB typical
Input gain adjustment	-18 dB to +80 dB, in 0.1 dB steps, adjustable per input
Microphone volume range	-100 dB to +12 dB
DC phantom power	+48 VDC, ±10% (inputs 1-4) switched on or off

Audio output

Number/signal type	2 HDMI embedded 2 DTP (embedded digital and remote balanced/unbalanced analog), XTP (embedded digital), or HDBaseT (embedded digital) 4 stereo balanced/unbalanced analog (variable)
Connectors	2 female HDMI 2 RJ-45 (4) 3.5 mm captive screw, 5 pole
Impedance	
Stereo audio	50 ohms unbalanced, 100 ohms balanced
S/PDIF	75 ohms
Gain error	±0.1 dB channel to channel
Maximum level (Hi-Z)	>+21 dBu, balanced or +15 dBu unbalanced
Output volume range	0 to -100 dB in 0.1 dB steps

EXP port

Transmission type	Proprietary
Connectors	1 RJ-45
Inputs	8 channels Rx
Outputs	16 channels Tx
Audio format	24 bit, 48 kHz sampling, uncompressed
EXP cable	Shielded CAT 6 up to 10 meters

Audio output — power amplifier

Number/signal type
- SA models ..... 1 stereo or mono (2 channels total)
- MA models ..... 1 mono, 70 V

Connector

NOTE: This connector accepts wires of 22 AWG to 12 AWG.

- SA models ..... (1) 5 mm screw lock captive screw connector, 4 pole
- MA models ..... (1) 5 mm screw lock captive screw connector, 2 pole

Load impedance
- SA models ..... 4 ohms minimum
- MA models ..... 50 ohms minimum

Amplifier type ..... Class D

Output power
- Stereo models ..... 25 watts (rms) per channel, 8 ohms, 1 kHz, 0.1% THD
50 watts per channel, 4 ohms, 1 kHz, 0.1% THD
- 70 V models ..... 100 watts (rms) @ 70 V, 1 kHz, 0.1% THD

Protection ..... Clip limiting, thermal, short circuit, DC output

Frequency response
- SA models ..... 20 Hz to 20 kHz, +1/–3 dB @ 1 watt
- MA models ..... 80 Hz to 20 kHz, +1/–3 dB @ 1 watt

THD + Noise ..... <0.1%, 1 kHz, 3 dB below clipping

S/N ..... >90 dB, 20 Hz to 20 kHz, unweighted

Control/remote — switcher

Serial control port ..... 1 bidirectional RS-232, 3.5 mm captive screw connector, 3 pole (rear panel)

Baud rate and protocol ..... 9600 (default) to 115200 baud, 8 data bits, 1 stop bit, no parity (default)

Serial control pin configuration ..... 1 = Tx, 2 = Rx, 3 = Gnd

USB control port ..... 1 front panel female USB mini-B

USB standards ..... USB 2.0, low speed

Ethernet control port ..... 1 female RJ-45 connector

Ethernet data rate ..... 10/100Base-T, half/full duplex with autodetect

Ethernet protocol ..... ARP, ICMP (ping), IP, TCP, DHCP, HTTP, SMTP, Telnet

Ethernet default settings ..... Link speed and duplex level = autodetected
IP address = 192.168.254.254
Subnet mask = 255.255.0.0
Default gateway = 0.0.0.0
DHCP = off

Web server ..... Up to 200 simultaneous sessions
40.0 MB nonvolatile user memory

Program control ..... Extron control/configuration program for Windows®
Extron Simple Instruction Set (SIS™)
Microsoft® Internet Explorer®, Telnet

Control/remote — external device (pass-through, unidirectional or bidirectional) (RS-232/IR over TP)

NOTE: Protocol is mirrored between the connected TP endpoints and the "Over TP" ports on the DTP CrossPoint 84. Signals from a control device pass into each DTP CrossPoint 84 "Over TP" port, are embedded with the TP signal, and sent to individual TP Tx or Rx endpoints for control of remote sink or source devices. The "Over TP" ports are simply pass-through connections to TP endpoints. There is no IR insertion from any DTP CrossPoint 84 control port to the "Over TP" ports. RS-232 can be inserted from the Ethernet connection.

Serial control pass-through ports

- DTP CrossPoint 84 input/TP Tx .. RS-232 via (2) 3.5 mm, 5 pole captive screw connectors (shared with IR ports)
- DTP CrossPoint 84 output/TP Rx RS-232 via (2) 3.5 mm, 5 pole captive screw connectors (shared with IR ports)

Baud rates ..... 300 to 115200 baud

Protocol ..... 8 or 7 data bits
1 or 2 stop bits
no parity (default), even or odd parity

Serial control pin configuration ..... 1 = Tx, 2 = Rx, 3 = Gnd

IR pass-through control ports ..... TTL level (0 to 5 V) modulated infrared control from 30 kHz up to 60 kHz

- DTP CrossPoint 84 input/TP Tx .. (2) 3.5 mm captive screw connectors, 5 pole (shared with RS-232 ports)
- DTP CrossPoint 84 output/TP Rx (2) 3.5 mm captive screw connectors, 5 pole (shared with RS-232 ports)

IR control pin configuration ..... 3 = Gnd, 4 = IR Tx, 5 = IR Rx

Control/remote — IPCP Pro control processor

Memory

- SDRAM ..... 512 MB
- Flash ..... 4.5 GB

Software and control options

- Software ..... Extron Global Configurator Plus and Professional for Windows®
- Control options ..... GlobalViewer®, TouchLink® for Web, TouchLink for iPad®, or TouchLink Pro touchpanels

Ethernet control

- Network interface controllers (NICs) 1
- Network switch ..... 1 unmanaged 3 port switch
- Connectors ..... 3 female RJ-45 connectors
- Data rate ..... 10/100/1000Base-T, half/full duplex with autodetect
- Protocols ..... DHCP, DNS, HTTP, HTTPS, ICMP, NTP, SFTP, SMTP, SNMP, SSH, TCP/IP, UDP/IP
- Default settings ..... Link speed and duplex level = autodetected
  IP address = 192.168.254.250
  Subnet mask = 255.255.255.0
  Gateway = 0.0.0.0
  DHCP = off
  DNS: 127.0.0.1

Serial control

- Quantity/type ..... 1 bidirectional RS-232, RS-422, RS-485 (port 1)
  2 bidirectional RS-232 (ports 2 and 3)
- Connectors ..... (1) 3.5 mm captive screw connector, 5 pole
  (2) 3.5 mm captive screw connectors, 3 pole
- Baud rate and protocol ..... 300 to 115200 baud (9600 baud = default); 8 (default) or 7 data bits; 1 (default) or 2 stop bits;
  no parity (default), even, odd, mark, or space parity

NOTE: The 5-pole ports support both hardware and software flow control.
The 3-pole ports support software flow control.
The default for both types of ports is no flow control

Pin configurations, serial, 5-pole captive screw	
RS-232 (default)	Pin 1 = Tx, 2 = Rx, 3 = Gnd, 4 = RTS, 5 = CTS
RS-422	Pin 1 = Tx-, 2 = Rx-, 3 = Gnd, 4 = Tx+, 5 = Rx+
RS-485	Pins 1 and 2 (tied together) = data-, 3 = Gnd, 4 and 5 (tied together) = data+
Pin configurations, serial, 3-pole captive screw	Pin 1 = Tx, 2 = Rx, 3 = Gnd
Digital I/O control	
Quantity/type	4 digital input/output (configurable)
Connectors	(1) 3.5 mm captive screw connector, 5 pole
Digital inputs	
Input voltage range	0 to 24 VDC, clamped at +30 VDC
Input impedance	29k ohms
Programmable pullup	1k ohms to +5 VDC
Threshold low to high	>2.8 VDC
Threshold high to low	<2.0 VDC
Digital outputs	250 mA sink from 24 VDC max.
Pin configurations	1, 2, 3, 4 = digital I/Os 1, 2, 3, 4; 5 = Gnd
IR/serial control	
Quantity/type	2 programmable: unidirectional RS-232 (±5 V), or TTL level (0 to 5 V) infrared (carrier and non-carrier) up to 300 kHz
Connector	(1) 3.5 mm captive screw connector, 5-pole
Baud rate and protocol (RS-232)	300 to 115200 baud (9600 baud = default); 8 (default) or 7 data bits; 1 (default) or 2 stop bits; no parity (default), even, odd, mark, or space parity
Pin configurations	For each port, pin 1 = signal, 2 = Gnd
IR output carrier frequency	30 kHz to 300 kHz
IR learning carrier frequency	30 kHz to 300 kHz
IR learning capture distance	2" (5.1 cm) to 12" (30.5 cm) from the front panel
Relay control	
Quantity/type	4 normally open relays
Relay control connectors	(1) 3.5 mm captive screw connector, 6 pole
Relay control contact rating	24 VDC, 1 A

General

Power supply	Internal Input: 100-240 VAC, 50-60 Hz
Power consumption	
DTP CrossPoint 84 IPCP SA	TBD watts
DTP CrossPoint 84 IPCP 70	TBD watts
Remote power capability	Supports up to four endpoints (two DTP Tx, two DTP Rx) (remote power not available in XTP and HDBaseT modes)
Temperature/humidity	Storage: -40 to +158 °F (-40 to +70 °C) / 10% to 90%, noncondensing Operating: +32 to +122 °F (0 to +50 °C) / 10% to 90%, noncondensing
Cooling	Fans, air flows from left to right (as viewed from front panel)
Thermal dissipation	
DTP CrossPoint 84 IPCP SA	TBD BTU/hr
DTP CrossPoint 84 IPCP 70	TBD BTU/hr
Mounting	
Rack mount	Yes
Enclosure type	Metal
Enclosure dimensions	3.5" H x 17.4" W x 15.3" D (2U high, full rack wide) (8.9 cm H x 43.2 cm W x 38.9 cm D) (Depth excludes connectors and knobs. Width excludes rack ears.)
Product weight	11.4 lbs (5.2 kg)
Shipping weight	14 lbs (6.0 kg)

DIM weight	22 lbs (10 kg)
Vibration	ISTA 1A in carton (International Safe Transit Association)
Regulatory compliance	
Safety	CE, c-UL, UL
EMI/EMC	CE, C-tick, FCC Class A, ICES, VCCI
Environmental	Complies with the appropriate requirements of RoHS, WEEE.
Warranty	3 years parts and labor

NOTE: All nominal levels are at ±10%.

NOTE: Specifications are subject to change without notice.

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